

Comments and Responses on Initial Proposed Chapter 1 Revision, April 18, 2017

FORMAT:

- Comment
 - Response

COMMENTS AND RESPONSES:

- Clarify calculation for wastewater project fees, especially standard specifications for force main and gravity sewer projects.
 - Additional notes and examples added to narrative after the fee table in Appendix 1-G “Construction Document Submission Guidance”
- On page 1-5 the Engineer is required to seal preliminary plans. Is this allowable in accordance with the rules of the Board?
 - PERs and ERs should be sealed. If plans, preliminary or otherwise, are contained within the PER or ER document they should be annotated as “not for construction”. Plans provided separately do not have to be sealed but should be consistent with the accompanying PER or ER.
- Page 1-11, there should be an exemption for small projects such as gravity sewer extensions under a certain footage or pumping stations under a certain design flow. If not, the fees for small projects will have to increase substantially because they are already too low to start with.
 - Added reduced format for calculation for small projects (Appendix 1-D-5). Small projects are defined as the smallest category of projects in accordance with the fee table (See Appendix 1- G.)
- Add language on page 1-9 that the Owner is responsible if they provide an in house inspector.
 - Neither the Rules nor the *Design Criteria* have the force of law with respect to suits over construction projects’ results. Consulting engineers and owners are encouraged to contact legal and professional risk insurance representatives when drafting contracts. Paragraph 6.02 “Design Without Construction Phase Services” in EJCDC E-500, *Agreement Between Owner and Engineer for Professional Services*, addresses this issue specifically.
- Should there be a specific exemption for cured-in-place pipe on page 1-12 first full paragraph for clarity sake? I believe the language allows same but it would be nice to have it clearly stated.
 - Done
- On page 1-12 is the State’s position that they don’t want plans for rehab jobs?
 - Gravity and force main rehab was exempted from the Design Criteria 4 years ago when Chapter 18 on Rehab was deleted. Note that funding agencies such as ECD, SRF and RD may require submission of plans to TDEC-DWR for approval. Fees for such reviews will be charged at 20% of the new construction rate for the total length of the gravity segments (manhole to manhole) affected.
- Page 1-14, please take out the sheet size of 24 inches by 36 inches. Plants and pumping stations especially need to be shown on larger sheets and there is no gain to requiring 24 inches by 36 inches in that instance. Maybe use language of a minimum of 24 inches by 36 inches. This is a huge item to us and most engineers that use larger sheets and could result in a substantial redesign cost and increase in bid cost due to lack of clarity in drawings for large structures.
 - Done. (TDEC-DWR does not have large printers. In the interest of saving paper, postage and time, we still need to require that plan sheets submitted via pdf digital format be legible at 11x17 size.)

- We disagree that basements should be served on page 1-15. The only way we will serve a basement by gravity is if the elevation of the basement is 2 feet above the downstream manhole lid. In the situation of a clog, most basements will flood since they are below the manhole lids and a surcharging sewer is going to follow gravity. We require a basement grinder pump in this instance.
 - This issue is more appropriately dealt with in Chapter 2 on collection systems and not in this Chapter on General Plans and Construction Document Review. Your point is well taken. TDEC is inclined to let the utility make the final decision and acknowledge the decision for specific lots on the plans; it is our opinion that this should be annotated on the approved plats by the developer's engineer before sewer availability is granted by the sewer utility.
- FEMA has updated the special flood hazard designations. Please update the comments in the *Design Criteria*.
 - The following is the full definition of areas: "Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded)." It still defines the 100 and 500 year flood special hazard areas so that terminology will remain in place.
- Policy, Section I, paragraph c.: The paragraph starts out with "Construction techniques", but most of the paragraph covers design rather than construction. Consider breaking this paragraph up into several paragraphs.
 - Retitled section.
- Policy, Section I, paragraph c., item 2: A TDEC policy to reduce N and P regardless of the size of the waterbody will likely cause a lot of concern, particularly on the part of the large treatment plants discharging into large waterbodies. Many people will read that as saying TDEC intends to put N and P limits on all plants. The paragraph could be reworded to say that TDEC encourages the operation of treatment facilities to reduce N and P as much as practical regardless of permit limits because of the beneficial impact on the environment.
 - Concur; done.
- Policy, Section 1, paragraph d.: I would avoid saying engineers are "not authorized to provide financial advice to utilities". Many engineers perform rate studies for clients and routinely give advice to clients about financing. I would just say "Engineers cost analysis and predictions..." Also, if DWR disapproves a treatment concept because the operators are not qualified to operate the process, you should expect significant protest. This is the kind of thing where people would get the politicians involved.
 - Concur; attempt made to satisfy this comment.
- Policy, Section 1, paragraph e.: The intent of this paragraph is somewhat unclear, but it appears that you are saying that DWR will recommend that SRF and CDBG funding not be given to entities that have a history of projects that don't actually reduce I/I, for example. Is this correct? If so, the

paragraph needs to be reworded to be more clear. I think this is a good idea, but you should expect significant protest if this is your intent.

- Section removed from Appendix.
- Policy, Sections II through VI: This information should be in the body of the criteria rather than the Policy. Most engineers will read the policy only once, so this information will get overlooked unless it's in the appropriate section of the Design Criteria.
 - Point well taken; this section is intended to replace the previous Director's "policy" statement that focused primarily on I&I. It is this Director's opinion that our objectives for improved plan submission and review is wider than just I&I and that specific details on I&I reduction is more appropriate in Chapter 2, soon to be proposed to be titled "Collection Systems". As appropriate and to the extent possible, these concepts have been added to checklists included in this revision.
- Policy, Section III, paragraph a.: This paragraph is not clear enough. It should specifically state that current low flow, current wet weather flow, and future wet weather flow need to be considered along with design flow. I also think that the "design flow" needs to be defined as the maximum monthly average flow.
 - Incorporated. These definitions will be incorporated in the appropriate technical chapters following.
- Policy, Section III, paragraph c.: The list of considerations for new technologies seems like it will prohibit new technologies because the information requested doesn't exist. Consider adding a provision for pilot testing of new processes if adequate information to confirm the process can meet effluent limits is not available.
 - Incorporated
- Policy, Section IV, General Comment: Many of the policy statements included in this section seem to be focused on larger stations. I design many pump stations that are smaller than 200 gpm. I'm not sure it is good engineering practice to put a VFD on a 25 hp pump for a school, for example. I have made several related suggestions below.
 - The engineer is allowed to determine appropriate sewer lift station accessories (with the concurrence of the owner. Departures from the design criteria should always be noted and justified so that there is a clear understanding of the situation by TDEC's reviewer and ultimately the Owner.)
- Policy, Section IV, paragraph b.ii: Is it TDEC's intention to require instrumentation for all pump stations? Consider adding the words "TDEC encourages the use of appropriate instrumentation in pump stations, particularly larger stations."
 - The engineer is allowed to determine appropriate sewer lift station accessories.